

**03050204-010**  
**(South Fork Edisto River)**

### **General Description**

Watershed 03050204-010 is located in Aiken, Edgefield, and Saluda Counties and consists primarily of the *South Fork Edisto River* and its tributaries from its origin to Shaw Creek. The watershed occupies 136,926 acres of the Sandhills and Upper Coastal Plain regions of South Carolina. The predominant soil types consist of an association of the Troup-Fuquay-Lakeland series. The erodibility of the soil (K) averages 0.11; the slope of the terrain averages 6%, with a range of 0-25%. Land use/land cover in the watershed includes: 0.61% urban land, 26.72% agricultural land, 10.50% scrub/shrub land, 0.12% barren land, 58.64% forested land, 2.68% forested wetland (swamp), and 1.06% water.

The South Fork Edisto River originates near the Town of Johnston and incorporates the drainage of First Branch, Hall Branch, and Temples Creek (Flat Rock Branch). The river then flows through Holmes Pond and accepts drainage from Satcher Branch, Long Branch, Beech Creek (Spann Branch, Bog Branch), Mill Creek (Flat Rock Creek, Pitts Branch, Lotts Creek), Easter Branch, Bulls Branch, Long Branch, Jumping Gut Creek, Mile Branch, and Kalop Branch. Further downstream, the river accepts drainage from Bridge Creek (Reedy Fork, Mill Branch), McTier Creek (Gully Creek, Harrison High Pond, Sawyer Pond, Boggy Branch, Holston Branch), Little Branch, Sandy Branch, Big Branch, Muddy Branch, and Beaverdam Branch (Smith Branch). In the lower portion of the watershed, Rocky Springs Creek (Wildcat Branch, Long Branch, Huttos Pond, Pitman Branch, Poplar Branch) enters the river followed by Purvis Branch, Clarks Mill Creek, and Cedar Creek (Neeses Lake). There are numerous ponds and lakes located along the tributaries draining into the river, used for recreation and irrigation. This watershed contains a total of 218.2 stream miles, all classified FW.

### **Water Quality**

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
E-001	S	FW	FIRST BRANCH AT S-19-41, BESIDE WTR PLANT AT JOHNSTON
E-002	S	FW	S. FORK EDISTO R. AT S-19-57, BELOW JOHNSTON WWTP
E-090	P/BIO	FW	SOUTH FORK EDISTO RIVER AT US 1, 12 MI NE AIKEN
E-578	BIO	FW	MCTIER CREEK AT S-02-209
E-021	W	FW	SOUTH FORK EDISTO RIVER AT SC 302

**South Fork Edisto River** - There are three SCDHEC monitoring sites along this section of the South Fork Edisto River, which was Class B until April, 1992. At the upstream site (E-002), aquatic life uses are fully supported, but there is a significant decreasing trend in pH. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentrations suggest improving conditions for these parameters. Recreational uses are fully supported and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

At the midstream site (E-090), aquatic life uses are fully supported based on macroinvertebrate community data, but there is a significant decreasing trend in pH and a significant increasing trend in turbidity. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus and total nitrogen concentrations suggest improving conditions for these parameters. In sediments, a very high concentration of lead was measured in 1995 and a high concentration of mercury was measured in 1997. Recreational uses are fully supported, but there is a significant increasing trend in fecal coliform bacteria concentration.

At the downstream site (E-021), aquatic life uses are fully supported, but there was a very high

concentration of chromium measured in 1996. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Although pH excursions were noted, they were typical of values seen in such systems. Recreational uses are partially supported due to fecal coliform bacteria excursions.

**First Branch (E-001)** - This stream was Class B until April, 1992. Aquatic life uses are fully supported, but there is a significant decreasing trend in pH. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Natural conditions in this stream may have contributed to the observed low dissolved oxygen values. This is also a secondary monitoring station and sampling is intentionally biased towards periods with the potential for low dissolved oxygen concentrations. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration suggests improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

**McTier Creek (E-578)** - This stream was Class B until April, 1992. Aquatic life uses are fully supported based on macroinvertebrate community data.

*A fish consumption advisory has been issued by the Department for mercury and includes the streams within this watershed (see advisory p.31).*

## **Permitted Activities**

### **Point Source Contributions**

<b>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD) COMMENT</b>	<b>NPDES# TYPE LIMITATION</b>
SOUTH FORK EDISTO RIVER ECW&SA/JOHNSTON #1 PLT PIPE #: 001 FLOW: 0.968 WQL FOR NH3-N, DO, TRC, BOD5	SC0025691 MINOR MUNICIPAL WATER QUALITY
SOUTH FORK EDISTO RIVER JM HUBER CORP./EDISTO PLANT PIPE #: 001 FLOW: -----	SC0024341 MINOR INDUSTRIAL EFFLUENT
BEAVERDAM BRANCH KENTUCKY-TENNESSEE CLAY CO. PIPE #: 001 FLOW: 0.15-0.45	SC0046388 MINOR INDUSTRIAL EFFLUENT
FLAT ROCK CREEK TOWN OF RIDGE SPRING/SOUTH LAGOON PIPE #: 001 FLOW: 0.150 WQL FOR NH3-N, DO, TRC, BOD5	SC0022268 MINOR MUNICIPAL WATER QUALITY

### **Camp Facilities**

<b>FACILITY NAME/TYPE RECEIVING STREAM</b>	<b>PERMIT # STATUS</b>
CAMP GRAVITT/RESIDENT	02-305-1800

GULLY CREEK TRIBUTARY	ACTIVE
CAMP GRAVITT #2/RESIDENT GULLY CREEK TRIBUTARY	02-305-1805 ACTIVE
CAMP LONG/RESIDENT BIG BRANCH	02-305-1801 ACTIVE

### ***Mining Activities***

<b><i>MINING COMPANY MINE NAME</i></b>	<b><i>PERMIT # MINERAL</i></b>
JAMES HENRY BLEDSOE CONSTRUCTION CO. MONETTA CLAYPIT	0956-02 SAND/CLAY
HOLMES TIMBER, INC. ABNEY MINE	0954-02 SAND/CLAY
GL WILLIAMS LANDSCAPING, INC. PIT 49	0978-02 SAND
JM HUBER CORP. CORDER MINE	0406-02 KAOLIN
SOUTHEASTERN CLAY COMPANY SEIGLER MINE	0070-02 KAOLIN
BLEECK ENTERPRISES, INC. ENTERPRISE MINE	1086-02 KAOLIN CLAY
SOUTHEASTERN CLAY COMPANY SHADE MINE	0071-02 KAOLIN
WR GRACE & CO. SCOTT MINE	0072-02 KAOLIN
KENTUCKY TENNESSEE CLAY CO. GENTRY MINE	0594-02 KAOLIN
JM HUBER CORP. BRODIE MINE	0038-02 KAOLIN
JM HUBER CORP. LAUGHLIN WEST MINE	1136-02 KAOLIN
SOUTHERN BRICK COMPANY ANDERSON MINE	0618-02 KAOLIN
JM HUBER CORP. LAUGHLIN MINE	0811-02 KAOLIN

### ***Water Supply***

<b><i>WATER USER (TYPE) WATERBODY</i></b>	<b><i>REGULATED CAPACITY (MGD) PUMPING CAPACITY (GPM)</i></b>
JM HUBER CORP.- EDISTO PLT (I)	0.288

**SOUTH FORK EDISTO RIVER**

**200**

**JM HUBER CORP.- EDISTO PLT. (I)  
SOUTH FORK EDISTO RIVER**

**2.448  
1,700**

## **Growth Potential**

**The greatest potential for growth in this agricultural-based watershed surrounds the three interchanges of Interstate 20: U.S. Highway 1, S.C. Highway 391, and S.C. Highway 39. A rail line runs between the Towns of Johnston and Monetta, both of which show slightly increasing populations. The Town of Johnston has tied into the Edgefield County Water and Sewer Authority's Regional Sewer Collection System. Other growth potentials for the area included the industrial park at the interchange of S.C. Highways 23 and 121 in Johnston, and the recent addition of both a federal and a state prison in the area.**